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Iwao Yamazaki

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EXAMINER

PORTER, JR, GARY A

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### **DETAILED ACTION**

The after-final amendment filed March 26, 2009 has been entered in order to clarify the claimed invention and to alleviate the 35 U.S.C. 112, second paragraph issues regarding the claims. The Examiner notes that this amendment has not altered the scope of the claims and that this amendment is not sufficient to overcome the outstanding 35. U.S.C. 103 rejections on Claims 1-14 submitted in the action mailed January 27, 2009 and duplicated below for reference.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (US Pub. 2003/0153958) in view of Ya Man LTD (JP 2000-060977).

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3. Regarding claim 1, Yamazaki discloses an electrode for treatment (Abstract), comprising an electric power source, which is an inherent feature since the system can be turned on and off (Section [0058]); a conducting pad 5 for attaching a human body (Abstract); a treatment current supplying means for supplying a pulsed current to a body part to which said conducting pad is attached on the electric power supply from said electric power source (Section [0012]); and a portable controlling means 2 for controlling said treatment current supplying means on the basis of a control signal received by the conducting pad 5 (Section [0067]). Yamazaki does not disclose a receiving means for receiving an external control signal at radio transmission. However, Ya Man teaches an electrode treatment device that contains a portable control unit 1 that transmits control signals via a transmission antenna to a receiving antenna on the treatment apparatus in order to control the stimulation given by an electrode belt (Abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in the Yamazaki reference to include electrode treatment device that contains a portable control unit 1 that transmits control signals via a transmission antenna to a receiving antenna on the treatment apparatus in order to control the stimulation given by an electrode belt, as taught and suggested by Ya Man, for the purpose of making the system more flexible by eliminating bulky wires.

4. In regards to claim 2, Yamazaki teaches that the current supplying means is configured so as to stop the supply of said pulsed current at a given period, i.e. defines the period of the treatment (Section [0058]).

5. With regards to claim 3, Yamazaki teaches that the conducting pad is comprised of a plurality of conducting pads, i.e. H1, H2, etc. (Sections [0032, 0054]).
6. Regarding claim 4, Yamazaki teaches a conducting pad connector (cable 59 and button recess 7) for electrically and mechanically connecting the plurality of pads, wherein the length of said conducting pad connector is changeable, i.e. any length of cable can be used in the connector (Section [0055]; Fig. 2).
7. In regards to claim 5, Yamazaki teaches that the conducting pad connector (cable 59 and button recess 7) is flexible, as seen by the bend in cable 59 (Fig. 2) and analogous cable 3 (Section [0055]; Fig. 1; Fig. 7).
8. With regards to claim 6, Yamazaki teaches an impedance measuring means 20 for measuring the impedance of said body part to which said conducting pad is attached by emitting a measuring current in said body part (Section [0064]).
9. Regarding claim 7, Yamazaki discloses that the impedance measurement obtained from the impedance measurement unit 20 is used to evaluate the body fat of a user and then prescribe a specific treatment based on the body fat reading (Section [0062-0068]; Fig. 4). Yamazaki does not disclose a transmitting means for transmitting the impedance measurement to a receiving means for controlling stimulation applied to the body based on an impedance measurement. However, Ya Man teaches an electrode treatment device that contains a portable control unit 1 that transmits control signals via a transmission antenna to a receiving antenna on the treatment apparatus in order to control the stimulation given by an electrode belt (Abstract). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made

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to modify the device in the Yamazaki reference to include electrode treatment device that contains a portable control unit 1 that transmits control signals via a transmission antenna to a receiving antenna on the treatment apparatus in order to control the stimulation given by an electrode belt, as taught and suggested by Ya Man, for the purpose of making the system more flexible by eliminating bulky wires.

10. In regards to claims 8 and 9, Yamazaki teaches that the frequency and therefore pulse width of stimulation is varied based on the treatment regimen chosen, which is determined by the body fat measurement derived from the impedance measurement (Section [0062-0073]).

11. With regards to claim 10, Yamazaki teaches a pad adhering means, i.e. a face fastener 54, that fastens the conducting pad 5 to the body (Section [0091]).

12. Regarding claim 11, Yamazaki teaches that the conducting pad is made of an adhesive sheet with electric conduction (Section [0092]).

13. In regards to claim 12, Yamazaki teaches that the conducting pad 5 is comprised of a plurality of conducting pads, H1-H4 commensurate with different kinds of shapes of said body part (Fig. 1).

14. With regards to claim 13, Yamazaki teaches a clothing, i.e. a belt, with said plurality of conducting pads which are fixed so as to be contacted to said body part at treatment (Fig. 1).

15. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al. (US Pub. 2003/0153958) in view of Ya Man LTD (JP 2000-060977),

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further in view of Granek et al. (US Patent 4,729,377). Yamazaki and Ya Man disclose all of the claimed invention except for a heart beat detecting means for detecting the number of heart beats through said conducting pad to be contacted to said body part. However, Granek teaches a garment apparatus for delivering and receiving electrical impulses that uses electrodes 24 can detect ECG signals. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in the Yamazaki and Ya Man combination to include a heart beat detecting means for detecting the number of heart beats through said conducting pad to be contacted to said body part, i.e. an ECG, as taught and suggested by Granek for the purpose of monitoring the function of the heart during therapy in order to ensure patient safety.

### ***Response to Arguments***

16. Applicant's arguments filed 3/26/2009 have been fully considered but they are not persuasive.

17. Specifically, in regards to Claim 1, applicant argues at page twelve of the remarks that "a prima facie case of obviousness has not been established because the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art." The Examiner respectfully disagrees.

The Examiner submits that the scope and content of the prior art has been ascertained, specifically that the Yamazaki and Ya Man references disclose electrotherapeutic systems wherein therapy is delivered to the body via electrodes and controlling means (refer to rejection of Claim 1). These references correspond to the scope defined by Applicant, i.e. a device for applying electrical currents to a patient's body (Paragraphs [0001-0006]).

The Examiner further submits that the differences between the claimed invention and the prior art has been ascertained. Specifically, Yamazaki discloses all of the claimed invention except a receiving means for receiving an external control signal at radio transmission (refer to rejection of Claim 1). In other words, Yamazaki discloses a system without wireless capability, i.e. all of the components of the system are electrically connected by physical wires. Furthermore, the Examiner notes that Yamazaki discloses a means for receiving control signals, i.e. physical wire 3 (Fig. 1) and a controlling means 2 (Fig. 1) for controlling the operation of the treatment electrode through a current supplying means based on received control signals from the physical wires. The Examiner agrees with Applicant that Yamazaki does not disclose controlling the electrode with wireless signals.

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However, as noted in the rejection of Claim 1 and in the response to arguments given in the response filed Jan. 27, 2009, the shift of technology from wired to wireless is not novel and would have been obvious to one of ordinary skill in the art. The Examiner relies on Ya Man, which discloses a system encompassing the same scope as that of Yamazaki, as an example of such a technological shift. As noted in the above rejection of Claim 1, Ya Man discloses eliminating the wired connections in favor of a wireless connection from the controller to the electrode apparatus (Ya Man: Abstract).

In regards to Applicant's arguments that "Ya Man LTD does not teach or suggest an electrode comprising a controlling means for controlling operation of said treatment electrode on the basis of said radio control signal" and "there is no teaching that the belt 3 contains electric components such as an electric power source, a treatment current supplying means, or a receiving means for receiving a radio control signal proper for said treatment electrode", the Examiner respectfully disagrees.



In order to clarify his position, the Examiner notes that the “electrode for treatment”, given it’s broadest reasonable interpretation in light of Applicant’s specification can be interpreted as the entire electrode belt 5 of Yamazaki or the belt electrode 3 of Ya Man, which are analogous constructions. As such, the belt electrode 3 of Ya Man contains a power source 2 that also functions as a treatment current supplying means and a controlling means since the wireless transmission signals received by receiving means 22 are submitted to power source 2 and subsequent therapy pulse are emitted and controlled by power source 2 based on the received wireless signals (Ya Man: Abstract). Furthermore, Ya Man teaches that the electrode 3 contains a plurality of conducting pads 32 for contacting the body (Ya Man: Abstract).

In view of the disclosure of Ya Man, the Examiner submits that one of ordinary skill in the art, given the references of Yamazaki and Ya Man, would have recognized the benefits of the wireless system, as disclosed by Ya Man, and therefore would have found it obvious to modify the electrode belt of Yamazaki to resemble the electrode belt of Ya Man in order to import the benefits of portability and free range of motion into the wired system of Yamazaki.

In view of the response to arguments above, the Examiner concludes that the outstanding 35 U.S.C. 103 rejections on the claims are proper and clearly state the case for obviousness. Applicant's amendment has sufficiently overcome the issue of indefiniteness but are not sufficient to obviate the outstanding prior art rejections of the claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GARY A. PORTER, JR whose telephone number is (571)270-5419. The examiner can normally be reached on Monday - Thursday, 8AM - 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on (571)272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/G. A. P./  
Examiner, Art Unit 3766

/Carl H. Layno/  
Supervisory Patent Examiner, Art  
Unit 3766

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